

WHAT IS CLAIMED IS:

1. A method for producing a thermoplastic resin container including a base portion, side walls extending from the base portion, and a bottom portion extending between the side walls with a distance between the base portion and the bottom portion in a thickness direction of the bottom portion, comprising the step of:

urging a part of a thermoplastic resin sheet into a cavity of a mold after heating the part of the thermoplastic resin sheet, so that the bottom portion and the side walls are formed with the distance,

wherein a bottom of the cavity has a convex shape area protruding in a depth direction away from the base portion formed on another part of the thermoplastic resin sheet on the mold.

2. A method according to claim 1, wherein a depth of the cavity in the depth direction is larger than the distance.

3. A method according to claim 1, wherein the convex shape is a truncated conical shape or truncated pyramid shape.

4. A method according to claim 1, wherein a main area of the bottom portion extends substantially parallel to the base portion.

5. A method according to claim 1, wherein a difference in depth between a top of the convex shape and a base thereof in the depth direction away from the

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base portion is 0.1 - 1 mm.

6. A method according to claim 1, wherein the thermoplastic resin container is adapted to contain a ball grid array electric element.

7. A method according to claim 1, wherein the distance is decreased to become less than the depth of the cavity after the distance becomes equal to the depth of the cavity.

8. A method according to claim 1, wherein the distance is decreased after the bottom portion contacts with the bottom of the cavity.

9. A method according to claim 1, wherein the bottom of the cavity has an annular planar area being adjacent to the convex shape area and surrounding the convex shape area.

10. A method according to claim 1, wherein the convex shape area has a planar area at a top thereof.

11. A mold for producing, from a thermoplastic resin sheet, a container including a base portion, side walls extending from the base portion, and a bottom portion extending between the side walls with a distance between the base portion and the bottom portion in a thickness direction of the bottom portion, comprising :

    a cavity adapted to receive a part of the thermoplastic resin sheet after heating the part of the thermoplastic resin sheet, so that the bottom portion and the side walls are formed in the cavity with the

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distance, and

a planar base area being adjacent to the cavity and surrounding the cavity,

wherein a bottom of the cavity has a convex shape area protruding in a depth direction away from the planar base area.

12. A mold according to claim 11, wherein a depth of the cavity in the depth direction is larger than the distance.

13. A mold according to claim 11, wherein the convex shape is a truncated conical shape or truncated pyramid shape.

14. A mold according to claim 11, wherein a main area of the bottom portion extends substantially parallel to the base portion.

15. A mold according to claim 11, wherein a difference in depth between a top of the convex shape and a base thereof in the depth direction away from the planar base area is 0.1 - 1 mm.

16. A mold according to claim 11, wherein the thermoplastic resin container is adapted to contain a ball grid array electric element.

17. A mold according to claim 11, wherein the mold allows the distance to be decreased to become less than the depth of the cavity after the distance becomes equal to the depth of the cavity.

18. A mold according to claim 11, wherein the mold allows the distance to be decreased after the

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bottom portion contacts with the bottom of the cavity.

19. A mold according to claim 11, wherein the bottom of the cavity has an annular planar area being adjacent to the convex shape area and surrounding the convex shape area.

20. A mold according to claim 11, wherein the convex shape area has a planar area at a top thereof.